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| APPLICATION NO.                                                                                                 | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/600,617                                                                                                      | 06/23/2003  | Kinya Aota           | 503.35255VX6        | 6836             |
| 20457                                                                                                           | 7590        | 06/27/2006           | EXAMINER            |                  |
| ANTONELLI, TERRY, STOUT & KRAUS, LLP<br>1300 NORTH SEVENTEENTH STREET<br>SUITE 1800<br>ARLINGTON, VA 22209-3873 |             |                      |                     | CANFIELD, ROBERT |
|                                                                                                                 |             | ART UNIT             |                     | PAPER NUMBER     |
|                                                                                                                 |             | 3635                 |                     |                  |

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/600,617             | AOTA ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Robert J. Canfield     | 3635                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 April 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 3,5,6 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 3,5,6 and 8-15 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 23 June 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. 08/820,231.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                               |                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                              | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                          | Paper No(s)/Mail Date. _____ .                                              |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/10/06</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|                                                                                                                                               | 6) <input type="checkbox"/> Other: _____ .                                  |

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1. This Office action is in response to the amendment filed 04/10/06. Claims 3, 5, 6 and 8-15 are pending. Claims 1, 2, 4 and 7 have been canceled.
2. Receipt is acknowledged to the supplemental IDS 04/10/06. It has been considered to the extent possible. Copies of several documents remaining missing and have not been considered.
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 3, 5, 6, and 8-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12 each occurrence of the language "is positioned within a range of a plate thickness of said member" renders the scope of the claim unclear as no plate or plate thickness has been defined.

Similarly in claims 13 and 15, the language "is positioned within a range of a plate thickness of said hollow frame member" renders the scope of the claim unclear as first, second, and third plates have been defined. It is unclear which if any of the plates are being referenced. The only thickness defined is that of the member not of any plate. Further note that the examiner finds no support in the specification for the horizontal surface being within the thickness of the first or second plate.

In each of the claims 12, 13 and 15 the language reciting that the center of the rotary tool is substantially coincided with and extension line of the vertical surface renders the intended scope of the claims indefinite. As understood a member is being claimed which is intended to be used in a friction stir welding process. This language positively recites the tool in combination with the member muddying the scope of the claims.

In claims 9 and 14, the language "said range of said extension line in said thickness of said third plate" lacks antecedent basis.

In claim 5, the language "said extension line of a center in said thickness of said third plate" lacks antecedent basis.

It is unclear in claims 6 and 11 where "another end side of the said first plate from a center in said thickness of said third plate" is.

In claim 10, said extension line of a center in said thickness of said third plate" lacks antecedent basis.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 3, 8, 12, 13, 15 as best understood are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,984,961 to Chieger et al.

Chieger provides a first plate 19, a second plate 21 and recessed portions 24 and 25 for carrying out a welding operation (column 2, lines 31+) at a connection

portion of the first and second plates with a third plate 22. The recess portions are shown opening in claimed directions and having substantially vertical and substantially horizontal surfaces within the thickness of the member/board. All references in claim to friction stir welding present an intended use environment. As best understood the rotary tool in the claims is not an element of the member. The members of Chieger provide all of the claimed structural features and is capable of performing the recited intended use.

7. Claims 5, 6, 9-11 and 14 as best understood appear to would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not teach the corner portion above the thickness of the third wall.

8. Applicant's arguments filed 04/10/06 have been fully considered but they are not fully persuasive.

The arguments related to the references failing to teach or suggest a member to be used or capable of use in friction stir welding are not persuasive. Recitations of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

The arguments concerning the position of the rotary with respect to the member are not persuasive. As best understood the tool is not an element of the member but rather used in the intended use.

Upon further review the Vanolo reference does not clearly show or teach the recessed portions as now claimed including the substantially vertical and horizontal surfaces or corner above the third wall.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Canfield whose telephone number is 571-272-6840. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Friedman can be reached on 571-272-6842. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert J Canfield  
Primary Examiner  
Art Unit 3635

06/23/06

